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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/199,816 11/25/98 SHIMADA

M 052241

MMC2/1010
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EXAMINER

DICKENS.C

ART UNIT

PAPER NUMBER

2855

DATE MAILED:

10/10/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/199816

Applicant(s)

SHIMADA et al.

Examiner

DICKENS

Group Art Unit

2855

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE -3- MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 3/5/01
- ☒ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-66 is/are pending in the application.
- Of the above claim(s) 56-63 is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-55 & 64-66 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on 3/5/01 is ☒ approved ☐ disapproved.
- ☒ The drawing(s) filed on 3/5/01 is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 20
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 3/5/01 have been approved by Examiner.
2. The applicants are strongly advised to use the proper symbols for the illustrated elements, i.e., a piezoelectric element is not metal but shaded as such, in accordance with MPEP 608.02.
3. Claims 1-55 and 64-66 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1 it is not clear how an ink jet head only comprises a single element. Are the applicants attempting to present the claim in Jepson format? The use of the numbers in parenthesis is improper because the numbers are not element identifiers. The recitations on lines 7-9 are confusing. For instance, it is not understood by "at least a part in the thickness direction. What "part" is the applicant referring to? It also, still appears the applicants are claiming different embodiments throughout the claims because the dependent claims do not read on the embodiment of claim 1 and thus there is numerous inconsistencies. Again, the applicants are strongly advised to review all the pending elected claims upon response to this Office Action is assure accuracy and consistency.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-55 and 64-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al. ('607) in view of Hasegawa et al. ('465).

'607 suggests the claimed an ink jet recording head essentially, including: flow passage substrate 101 in which pressure chambers 102 communicating with nozzle openings 109 are defined and a piezoelectric element being placed on one side of said flow passage substrate via a diaphragm 103 and having at least a lower electrode 104, piezoelectric layer 105 and an upper electrode 106, comprising: a zirconium oxide compression film having a compressive stress; wherein the compression film is a conductive film having a first conductive film and a second conductive film made of platinum/oxide metal (Figs. 2-4, 8a-8c).

However, '607 does not specifically suggest a compression film having a removal part. '465 suggests a removal part of a compressive film (Figs. 2a-3b) for the purpose of providing an ink jet head having improved liquid spray operations.

Accordingly, it would have been obvious to one having ordinary

skill in the art at the time the invention was made to have a compression film having a removal part in '607 for the purpose of providing an ink jet head having improved liquid spray operations.

6. Applicants' arguments filed 3/5/01 have been fully considered but they are not persuasive. The applicants argue '607 does not provide film defined by claim 1. Specifically, '607 does not indicate that any of layers 202, 210, 220 have a compressive stress. All materials have compressive stress and one skilled in the art would find it obvious that a oxide film would exhibit a compressive force. Next, the applicants argue '465 does not make up the deficiencies of '607. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Also, one cannot show non-obviousness by attacking references individually where, as here the rejections are based on a combination of references. In re Keller, 208 USPQ 871 (CCPA 1981). Accordingly, all of the above arguments are deemed to be persuasive. Hence, the modified '607 clearly teaches and suggests the applicants' claimed invention.


7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


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Art Unit: 2855

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Dickens whose telephone number is (703) 305-7047. Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist or the customer service representative whose telephone numbers are (703) 308-0956 or (703) 308-4800 respectively. The fax numbers are (703) 305-3431 and (703) 305-3432.


cd/dickens
October 3, 2001


R. Paul
October 3, 2001